

Indolinone Combinational Libraries and Related Products
and Methods for the Treatment of Disease

Abstract

The present invention relates to organic molecules
5 capable of modulating, regulating and/or inhibiting
protein kinase signal transduction. Such compounds are
useful for the treatment of diseases related to
unregulated protein kinase signal transduction, including
cell proliferative diseases such as cancer,
10 atherosclerosis, arthritis and restenosis and metabolic
diseases such as diabetes. The present invention features
indolinone compounds that potently inhibit protein kinases
and related products and methods. Inhibitors specific to
the *FLK* protein kinase can be obtained by adding chemical
15 substituents to the 3-[(indole-3-yl)methylene]-2-
indolinone, in particular at the 1' position of the indole
ring. Indolinone compounds that specifically inhibit the
FLK and platelet derived growth factor protein kinases can
harbor a tetrahydroindole or cyclopentano-b-pyrrol moiety.
20 Indolinone compounds that are modified with substituents,
particularly at the 5 position of the oxindole ring, can
effectively activate protein kinases. This invention also
features novel hydrosoluble indolinone compounds that are
tyrosine kinase inhibitors and related products and
25 methods.